

Transmitted via Electronic Mail

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Subject:

Semi-Annual Progress Report No. 1
Revitalizing Auto Communities Environmental Response (RACER) Trust
Buick City Site, Flint, Michigan

Reference:

30075935

Date:

April 15, 2021

Dear Mr. Lund:

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), Arcadis is submitting this Semi-Annual Progress Report No.1 in accordance with Section 8.9.3 of the RACER Trust's Corrective Action Consent Order (Consent Order), MMD Order No. 111-02-2020 for the Buick City Site located in Flint, Michigan (the Site) (**Figure 1**), which was effective on August 5, 2020.

This Semi-Annual Progress Report No. 1 covers the period of August 5, 2020 through March 31, 2021 and briefly summarizes the work performed to date, data collected, problems encountered, project schedule, and estimated percent complete for a list of ongoing Site activities. Areas of the Site and specific Site features discussed herein are presented on **Figure 2** (Northend of the site) and **Figure 3** (Southend of the Site).

1. Work Performed

The list below provides a summary of the work conducted from August 5, 2020 through March 31, 2021 at the Buick City Site.

- The Outfall 003 storm sewer reroute began in early 2020 and was substantially completed by April

9, 2021. Work completed during the period of this report included: rerouting a portion of the upgradient off-Site flow to Outfall 002; re-routing a portion of the upgradient off-Site flow to the Outfall 003 southern main; and lining a section of storm sewer in Stewart Avenue.

- In August – September 2020 the Outfall 003/004 Stormwater Treatment and Diversion System cleaning was completed.
- On November 23, 2020, a video was completed of the Outfall 010 storm sewer to identify potential sources of infiltration, discharge, or collapse.
- In December 2020, samples were collected from Outfall 010, Outfall 011, the sanitary sewer and daylighted groundwater to investigate the daylighting incident (discussed in further detail in Section 3 below). Additional samples were collected from the Outfall 010 and 011 storm sewers and the sanitary sewer to continue to monitor PFAS concentrations in January and March 2021.
- On January 14, 2021, a flow investigation was completed at Outfall 010 between manhole MH 10-1 and the outfall to evaluate groundwater infiltration.
- In January 2021, sanitary sewer manhole MH H-1A was located, excavated, and reset to provide access to the sanitary sewer. Following completion of re-establishing the manhole, on January 28, 2021 a video was completed of the laterals entering MH H-1A.
- In January 2021, wood samples were collected from the Northend at Factory 83/84 to investigate exposed wood block flooring. The wood samples were submitted for laboratory analysis PCBs.
- On February 11, 2021, a video was completed of northwestern storm sewer lateral entering Outfall 010 manhole MH 10-5.
- In March 2021, 18 manhole structures in the Building 04 Area were filled with concrete to minimize flow to the storm and sanitary sewers in Hamilton Avenue and relieve hydraulic head pressure in the Hamilton Avenue/CSX railroad area. After the completion of filling activities samples were collected from select manholes along the Outfall 010 and Outfall 011 storm sewers and the Hamilton Avenue sanitary sewer to evaluate PFAS concentrations. In addition, groundwater levels were gauged to monitor changes in elevations.
- On March 18, 2021, water and sediment samples were collected from the eastern former aeration lagoon for analysis of VOCs, SVOCs, metals, PCBs and PFAS. On March 22-23, 2021, four borings were completed adjacent to the former aeration lagoon to evaluate groundwater levels in the area.

In addition to the specific Site activities noted above, various Site investigation activities were completed

as listed below:

- Additional PFAS investigation samples were collected from storm sewer Outfalls 001, 002, 010, 011, and 013.
- PFAS soil and groundwater delineation investigation continued at the Former Foam Generation Building in the Northend of the Site and Building 04, Building 16, and Factory 84 Areas in the Southend of the Site.
- PFAS groundwater characterization samples were collected at Factory 36 Area at the Northend of the Site.
- Groundwater samples were collected from Factory 36 and Building 40 to monitor current concentrations of constituents of concern.
- Lead soil delineation activities were completed at Factory 81 and Factory 83/84 in the Northend of the Site and Building 12 and Former Employee Parking Lot (FEP) in the Southend of the Site.
- Lead groundwater sampling was completed at the Northend of the Site, downgradient of the lead soil impacts.
- Soil and groundwater samples were collected to characterize waste management unit (WMU) #4 and #5 (located in the Northend of the Site) for VOCs, SVOCs, and PFAS.
- Samples were collected from select manholes along storm sewer Outfall 013 for dry weather and runoff sampling for PFAS analysis.
- Dry weather samples were collected from the Outfall 007 and 012 outfalls for PFAS analysis as part of the short-term water characterization study.
- NPDES required weekly PCB sampling was completed at the Outfall 003 storm sewer.

2. Data Collected

The samples collected as part of Site investigation or monitoring activities since August 1st are discussed below.

2.1 Storm Sewer Water Samples

As required per Part 1, Section A 2 in the current National Pollution Discharge Elimination System (NPDES) Permit No. MI0001597, weekly composite samples were collected from Monitoring Point 003A. This data will be included in the 2021 Yearly Pollutant Minimization Plan (PMP) for PCBs report, which will be submitted to the Michigan Department of Environment, Great Lakes and Energy (EGLE) as required in the NPDES permit.

In September, the following storm sewer samples were collected:

- Three samples were collected from Outfall 010 manholes at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- One sample was from Outfall 011 manholes at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Seven samples were collected from Outfall 013 manholes at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.

In November, the following storm sewer samples were collected:

- Two samples were collected from Outfall 001 manholes at the Northend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Four samples were collected from Outfall 010 manholes at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Ten samples were collected from Outfall 013 manholes at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.

In December, the following storm sewer samples were collected:

- Seven samples were collected from Outfall 010 manholes at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- One sample was collected from Outfall 011 manholes at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- One sample was collected from Outfall 002 manhole 2-20-1 at the Northend of the Site. The samples were submitted for laboratory analysis of PFAS.

In January 2021, the following storm sewer samples were collected:

- Four samples were from Outfall 010 manholes at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- One sample was collected from manhole MH 5-6 along the Outfall 005 storm sewer. The sample was submitted for laboratory analysis of VOCs, SVOCs, metals, PFAS, as well as pH, TDS, TSS, sulfate, chloride, chlorine, fluoride, nitrate, and alkalinity.

In February 2021, the following storm sewer samples were collected:

- One sample was collected from Outfall 003 and one sample was collected from Outfall 011. The samples were submitted for laboratory analysis of PFAS.

In March 2021, the following sewer samples were collected:

- One sample each was collected from Outfall 007 and Outfall 012 for dry weather sampling. The samples were submitted for laboratory analysis of PFAS.
- Two samples were collected from the Outfall 010 storm sewer. The samples were submitted for laboratory analysis of PFAS.
- One sample was collected from the Outfall 011 storm sewer. The samples were submitted for laboratory analysis of PFAS.
- Six samples were collected from the collected from the Outfall 013 storm sewer. The samples were submitted for laboratory analysis of PFAS.

2.2 Sanitary Sewer Water Samples

In September, four samples were collected from select sanitary sewer manholes along Hamilton Ave. The samples were submitted for laboratory analysis of PFAS.

In December, two samples were collected from select sanitary sewer manholes along Hamilton Ave. The samples were submitted for laboratory analysis of PFAS.

In January, two samples were collected from select sanitary sewer manholes along Hamilton Ave. The samples were submitted for laboratory analysis of PFAS.

In March, three samples were collected from select sanitary sewer manholes along Hamilton Ave. The samples were submitted for laboratory analysis of PFAS.

2.3 Groundwater Samples

In August, the following samples were collected:

- Fifteen samples were collected from monitoring wells near Leith Street. The samples were submitted for laboratory analysis of lead.
- Forty-six borehole water samples were collected from borings/temporary wells completed at the former Building 04 Area located in the Southend of the Site. The borehole water samples were submitted for laboratory analysis PFAS.
- Fifteen borehole water samples were collected from borings/temporary wells completed at the former Factory 84 Area located in the Southend of the Site. The borehole water samples were submitted for laboratory analysis PFAS.

- Four borehole water samples were collected from borings/temporary wells completed at the former Building 16 Area located in the Southend of the Site. The borehole water samples were submitted for laboratory analysis PFAS.

In September, the following samples were collected:

- Thirty-four borehole water samples were collected from borings/temporary wells completed at the former Building 04 Area located in the Southend of the Site. The borehole water samples were submitted for laboratory analysis PFAS.
- Eleven borehole water samples were collected from borings/temporary wells completed at the former Factory 84 Area located in the Southend of the Site. The borehole water samples were submitted for laboratory analysis PFAS.

In October, the following samples were collected:

- Four samples were collected from monitoring wells in the former Factory 36 Area at the Northend of the Site. The samples were submitted for laboratory analysis of VOCs and/or PFAS.
- Four samples were collected from monitoring wells downgradient of the former Factory 36 Area at the Northend of the Site. The samples were submitted for laboratory analysis of 1,4-dioxane and PFAS.
- Nine samples were collected from monitoring wells in the former Building 04 Area and 16 samples were collected from boreholes/temporary wells. The samples were submitted for laboratory analysis of PFAS.
- Four samples were collected from monitoring wells in the former Building 02/12/16 Area and one sample was collected from a temporary well. The samples were submitted for laboratory analysis of PFAS.
- Nine samples were collected from monitoring wells in the former Factory 84/94 Area and two samples were collected from boreholes/temporary wells. The samples were submitted for laboratory analysis of PFAS. In addition, the sample collected from 40-304 (Building 40 Area) was submitted for PCB analysis.

In December, the following samples were collected:

- Two samples were collected from monitoring wells in the former Building 04 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Twelve borehole water samples were collected from borings/temporary wells completed at the former WMU #4 and #5 Area located in the Northend of the Site. The borehole water samples

were submitted for laboratory analysis of select VOCs, SVOCs, and/or PFAS.

- Five borehole water samples were collected from borings/temp wells completed at the former Foam Generation Building Area located in the Northend of the Site. The borehole water samples were submitted for laboratory analysis of PFAS.

In January, the following groundwater samples were collected:

- Seventeen samples were collected from monitoring wells in the former Building 04 Area and two samples were collected from borings/temporary wells. The samples were submitted for laboratory analysis of PFAS.
- Twenty samples were collected from monitoring wells in the former Factory 84 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.

In February, the following groundwater samples were collected:

- Eight samples were collected from monitoring wells in the former Building 04 Area and 20 samples were collected from borings/temporary wells. The samples were submitted for laboratory analysis of PFAS.
- Three samples were collected from monitoring wells in the former Factory 84 Area at the Southend of the Site and eight samples were collected from borings/temporary wells. The samples were submitted for laboratory analysis of PFAS.
- Fourteen samples were collected from temporary wells installed at the Foam Generation Building Area in the Northend of the Site. The samples were submitted for laboratory analysis of PFAS.

In March, the following groundwater samples were collected:

- Nineteen samples were from temporary wells installed in the Building 04 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Three samples were collected from permanent monitoring wells installed in the Factory 84 Area and on the Hamilton Avenue right-of way. The samples were submitted for laboratory analysis of PFAS.
- Six samples were collected from temporary wells installed at the Foam Generation Building in the Northend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Four samples were collected from temporary wells installed in the Former Employee Parking Lot at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS, PCBs, metals, VOCs, and SVOCs.

2.4 Soil Samples

In August, the following soil samples were collected:

- Four soil samples were collected from two locations in the Former Employee Parking (FEP) lot at the Southend of the Site. The samples were submitted for laboratory analysis of lead.
- Six soil samples were collected from two locations in the former Factory 84 Area at the Southend of the Site. The samples were submitted for laboratory analysis of VOCs.
- Forty-eight soil samples were collected from seven locations in the former Factory 84 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Twenty-two soil samples were collected from seven locations in the Factory 83/84 Area at the Northend of the Site. The samples were submitted for laboratory analysis of lead.
- Six soil samples were collected from two locations in the former Factory 81 Area at the Northend of the Site. The samples were submitted for laboratory analysis of lead.
- Nineteen soil samples were collected from three locations in the former Building 40 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Ninety-five soil samples were collected from 14 locations in the former Building 04 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Twenty-two soil samples were collected from four locations in the former Building 16 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.

In September, the following soil samples were collected:

- Six soil samples were collected from two locations in the former Factory 81 Area at the Northend of the Site. The samples were submitted for laboratory analysis of lead.
- Eleven soil samples were collected from four locations in the former Factory 83/84 Area at the Northend of the Site. The samples were submitted for laboratory analysis of lead.
- Seventy-two soil samples were collected from 12 locations in the former Building 04 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.

In October, nine soil samples were collected from three locations in the former Building 12/29 Area at the Southend of the Site. The samples were submitted for laboratory analysis of lead.

In December, the following soil samples were collected:

- Ten soil samples were collected from five locations in the former Foam Generation Building Area at the Northend of the Site. The samples were submitted for laboratory analysis of PFAS.

- Seventeen soil samples were collected from 10 locations in the former waste management units (WMU) #4 and #5 at the Site. The samples were submitted for laboratory analysis of select VOCs, SVOCs, and PFAS.

In January, the following soil samples were collected:

- Fifty-three soil samples were collected from six locations in the former Building 04 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Seven soil samples were collected from five locations in the former Building 04 Area at the Southend of the Site. The samples were submitted for laboratory analysis of total organic carbon.
- Forty-two soil samples were collected from 18 locations in the former Factory 84 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.

In February, the following soil samples were collected:

- Three soil samples were collected from one location in the former Factory 84 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Seventy-seven soil samples were collected from eight locations in the former Building 04 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Forty-one soil samples were collected from seven locations in the former Foam Generation Building Area at the Northend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Seven samples were collected from borings installed in the Building 04 Area at the Southend of the Site. The samples were submitted for moisture content, specific gravity, bulk density, and total organic carbon.

In March, the following soil samples were collected:

- Forty-four samples were from borings completed in the Building 04 Area at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS. Four of these samples were submitted for laboratory analysis of PFAS, PCBs, metals, VOCs, and SVOCs.
- Thirty-five samples were collected from borings completed at the Foam Generation Building in the Northend of the Site. The samples were submitted for laboratory analysis of PFAS.
- Eight samples were collected from borings completed in the FEP Lot at the Southend of the Site. The samples were submitted for laboratory analysis of PFAS, PCBs, metals, VOCs, and SVOCs.

2.5 Surface Water/Seep Samples

In December, two samples were collected of daylighting water located at the Building 04 area in the Southend of the Site. The samples were submitted for VOCs, SVOCs, chlorine, fluoride, and/or PFAS.

In March, four surface water samples were collected from two locations in the Eastern Lagoon Area at the Site. The samples were submitted for laboratory analysis of VOCs, SVOCs, metals, PCBs, PFAS, TDS and TSS.

2.6 Wood Samples

In January, six wood samples were collected from the Northend at Factory 83/84 to investigate exposed wood bock flooring. The wood samples were submitted for laboratory analysis PCBs.

2.7 Sediment Samples

In March, two sediment samples were collected from the former aeration pond at the Site. The samples were submitted for laboratory analysis of VOCs, SVOCs, metals, PCBs and PFAS.

3. Problems Encountered

Daylighting groundwater was identified on December 14, 2020 at the Site near Hamilton Avenue (Building 04 Area). The groundwater had ponded at the surface, was flowing into Hamilton Avenue and was entering a curb drain connected to Outfall 011. It was thought that the daylighting may have been caused by the temporary plug that had been placed in the Hamilton Avenue sanitary sewer in July 2020; therefore, the temporary plug was removed on December 15, 2020. On December 17 samples were collected from the ponded water and manhole MH 11-6 along the Outfall 011 storm sewer and were submitted for analysis of VOC, SVOC, metals, PCBs, chlorine, fluoride, and PFAS. Only PFAS and select metals were detected in these samples, and only PFAS was detected at a concentration exceeding GSI criteria. The PFAS concentration detected at manhole MH 11-6 was consistent with previous levels.

By the afternoon of December 17th, the water was no longer leaving the Site and by December 23rd the ponded water was no longer present.

On January 19, 2021 RACER gave an update to EGLE regarding the status of the daylighting event, actions taken and additional planned activities.

4. Project Schedule – Near-Term Milestone Activities Anticipated During the Next Semi-Annual Period

Site work for the second and third quarter of 2021 includes the following ongoing Site Activities:

- Continue OMM inspections of 003/004 Oil Removal System -pending completion of reroute activities.
- Continue semi-annual inspection of the Leith Street retaining wall.
- Continue to perform inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Dispose of waste as necessary.
- Continue to perform inspections of Oil Interceptor #2.
- Continue Outfall 003A weekly sample collection – pending discussion with EGLE.
- Continue quarterly P-trap inspections associated with the French drain flowing into the Outfall 005 storm sewer.
- Continue semi-annual SWPPP inspections.

In addition, the following activities are planned to be continued/completed in second and third quarter.

- Cleaning of 003/004 Stormwater Treatment and Diversion System
- Cleaning/decommissioning of Oil Interceptor #2
- Complete semi-annual SWPPP Report for the NPDES permit
- Complete annual NPDES wet weather report
- Complete annual NPDES PCB minimization report
- Continue delineation of Site PFAS impacts
- Continue addressing PFAS impact at Outfalls and sanitary sewer
- Complete Outfall 003 Re-route activities.

5. Estimated Percent Complete

This section presents a percentage complete for action items outlines in the CACO:

-
- Reconcile List of AOIs, AOCs, TSCA areas, etc. (Due Nov 3, 2020) – 100%
- Meeting with EGLE to discuss CA objectives, expectations, etc. (Due August 20, 2020) - 100%
- Establish public repository (Due September 4, 2020) – 100%
- Public Involvement/Communications Plan (Due September 4, 2020) – 100%
- Corrective Action Framework (Due Nov 3, 2020) – 100%
- List of electronic files submitted to EGLE (Due February 1, 2021) – 100% (Note that EGLE did not request that the actual electronic files could be submitted in batches following the February 1 submittal. That process is ongoing.)
- Semi-annual progress reports – ongoing

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- Need to identify investigation, further corrective action or EGLE approved institutional control for WMU 2, WMU 3, WMU 4, WMU 5, WMU 7 and WMU 10 – 15%
- CMS workplan (Due 90 days after approval of CAF) – 0%
- CMS field work (to start within 30 days of CAF WP approval) – 0%
- CMS Report (Due 60 days after completion of CMS activities) – 0%
- CM Implementation Plan (Due within 90 days of EGLE approval of the CMS) – 0%
- CA440 Remedy Decision (Due 10/15/22) – 0%
- C550RC Remedy Constructed (Due 12/31/24) – 0%
- CA800YE Ready for Reuse (6/1/24) – 0%
- CA 900Cr Performance Standards Attained (Due 9/30/26) – 0%
- CA750 – Re-Evaluated for PFAS – 0%

If you have any questions, please contact me.

Sincerely,

Arcadis of Michigan, LLC



Micki Maki

Senior Technical Lead

Copies:

Grant Trigger, RACER Trust (via email)

Flint Public Library

Attachments:

Figure 1 – RACER Buick City Site Map

Figure 2 – Northend Work Locations

Figure 3 – Southend Work Locations



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